



Program Summary

The Muckleshoot Indian Tribe proposes to conduct specific habitat enhancement projects in 2 adjacent watersheds that are important historical hunting areas for Tribal members. Elk (*Cervus elaphus*) and black-tailed deer (*Odocoileus hemionus columbianus*) numbers have declined dramatically in these 2 watersheds and hunting opportunity has been substantially restricted or eliminated. Available data suggest that habitat may be limiting elk and deer productivity in these areas. We expect that the enhancement projects will improve adult body condition,



Adult cow and bull elk

adult survival, juvenile birth weight, and juvenile survival, and ultimately lead to population growth and restore hunting opportunities.

We propose to document animal responses to the treatments by monitoring adult elk body condition and survival, and monitoring population trends and sex and age ratios. Cougar (*Puma concolor*) have been documented as a significant predator on elk and deer and the Tribe has responded by initiating aggressive cougar hunting. The Tribe's approach, however, has been controversial and we propose to take a balanced and widely-accepted approach toward managing cougar

numbers so that they are in balance with the available deer and elk prey base. In order to determine optimal cougar numbers we need to know available deer and elk numbers, of which some data are available. Estimates of deer numbers in the White River watershed, however, are lacking and we proposed to initiate a deer population estimation project to determine those numbers. To ensure that the cougar management approach is working, we propose to radio-mark a core population of cougar and identify all individuals using DNA analyses of fecal and hair samples.

All objectives of the proposed project will be implemented within one year, however, project benefits will continue for many years. The project will benefit wildlife through habitat improvements, larger population sizes, and better understanding of wildlife-habitat and predator-prey relationships. The project will benefit Muckleshoot Tribal members who rely on game animals for subsistence hunting and cultural uses. The project will also benefit other Pacific Northwest treaty tribes who hunt under tribal regulation, and all citizens of Washington state who hunt under state regulation in the proposed project area. The cost of the project is expected to be \$417,000 with the Muckleshoot Tribe contributing \$213,500. We are applying for the \$203,500 balance of the proposed project from the US Fish and Wildlife Service Tribal Wildlife Grants Program.

~ 50/50 COST
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